



State of Delaware  
Department of Natural Resources  
& Environmental Control  
Division of Water  
89 Kings Highway  
Dover, Delaware 19901

Surface Water Discharges Section  
Construction Permits Branch

Phone: (302) 739-9946  
Fax: (302) 739-8369

**INSTRUCTIONS FOR COMPLETING THE PERMIT APPLICATION FOR  
THE CONSTRUCTION OF WASTEWATER COLLECTION AND CONVEYANCE SYSTEMS**

The following items must accompany the application. **Please note that incomplete application packages will be returned in their entirety and not reviewed until such time as all required information is received.**

- ☒ 1. A narrative summary of the intended purpose and design of the proposed facilities.
- ☒ 2. One (1) set of final construction plans and specifications, if applicable, signed and sealed by a Delaware-registered Professional Engineer or a Delaware-registered Professional Land Surveyor for gravity systems only.
- ☒ 3. The final plans must be drawn to scale showing slopes, inverts, pipe types and sizes, existing and proposed ground surfaces, tops of manholes, water lines, stormwater and stream crossings, encasements shown in plan and profile, and other information if pertinent or requested.
- ☒ 4. For pump/lift stations and force mains, include all calculations and pump/performance curves.
- ☒ 5. A check made payable to the State of Delaware for eight hundred twenty-five dollars (\$825.00), the non-refundable permit review fee. This fee covers the initial review and one follow-up review of any corrections or changes made to address the Division's comments. An additional eight hundred twenty-five dollars (\$825.00) non-refundable review fee must be submitted for resubmission of the plans if changes are made to the project which trigger a complete review of the permit application.

Please submit the completed application package, as outlined above, to DE DNREC, Division of Water, SWDS, 89 Kings Highway, Dover, DE 19901. Please note, a new application, including the review fee, must be submitted if the Division's comments are not addressed or if requested supplemental information is not provided within one (1) year of the comment or request date.

The following items must be submitted prior to permit issuance:

- ☒ 6. Verification from the appropriate county or municipal planning authority that the project has the proper zoning approval.
- ☒ 7. A letter from the owner/operator of the wastewater facilities to which the proposed collection and conveyance facilities connect. The letter must include confirmation that the owner/operator has approved the project, that the owner/operator will take responsibility for treating and disposing of the wastewater to be conveyed and that the downstream facilities have the capacity to manage the additional flows without causing or contributing to violations of Delaware's Environmental Protection Act (7 Del. C., Chapter 60) and the regulations promulgated thereafter. This includes, but is not limited to, unauthorized discharges such as overflows at manholes and violations of the treatment system's operating permit (for example, the National Pollutant Discharge Elimination System (NPDES) permit).

*Visit us on the web at: <http://www.dnrec.delaware.gov/wr/Services/Pages/SurfaceWaterDischarges.aspx>*

Document last revised: May 14, 2013

**APPLICATION FOR THE CONSTRUCTION OF  
WASTEWATER COLLECTION AND CONVEYANCE SYSTEMS**

Application must be complete, typewritten or clearly printed

Date Application Submitted \_\_\_\_\_

PROJECT INFORMATION			
<b>Project Name and Location</b> This submittal covers the City of Rehoboth Beach Wastewater Treatment Plant (RBWWTP) Effluent Pumping Station (2017-003), Force Main (2017-002), and Outfall (2017-001) projects located in the City of Rehoboth Beach, DE.			
<b>Tax Parcel Number(s)</b> 334-14.09-215.00			
<b>County</b> <input type="checkbox"/> Kent <input type="checkbox"/> New Castle <input checked="" type="checkbox"/> Sussex		<b>Watershed</b> ( <a href="http://www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessment.aspx">www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessment.aspx</a> ) <input type="checkbox"/> Chesapeake Bay <input type="checkbox"/> DE Bay/Estuary <input checked="" type="checkbox"/> Inland Bays/ <b>Atl Ocean</b> <input type="checkbox"/> Piedmont	
<b>Sewer District or Interceptor</b> West Rehoboth Expansion of the Dewey Beach Sanitary Sewer District		<b>Wastewater Treatment/Disposal Facility Name</b> Rehoboth Beach Wastewater Treatment Plant	
<b>Anticipated Construction Start Date</b> October 2017		<b>Treatment/Disposal Facility Owner and Operating Permit Number</b> Owner: City of Rehoboth Beach State Permit Number SPCC 3084D/74 NPDES Permit Number DE 0020028 (Updated NPDES permit currently under review)	
Please note, construction permits expire three (3) years from the date of permit issuance.			
Are you requesting <u>plan review and comment</u> or WPCC Construction Permit issuance? (circle one)			
<b>Design Flow (gallons/day)</b>		<b>Peak Factor</b>	<b>Basis of Design</b>
Average 3.5 mgd	Peak 7.2 mgd (summer)	2	7.2 mgd
<b>Description</b> Proposed work as described in Section 4.5 of the EIS attached.			
OWNER/DEVELOPER			
<b>Company Name</b> City of Rehoboth Beach			
<b>Mailing Address</b> 229 Rehoboth Avenue, P.O. Box 1163			
<b>City</b> Rehoboth Beach		<b>State</b> DE	<b>Zip</b> 19971
<b>Contact Name</b> Sharon Lynn			
<b>E-Mail Address</b> slynn@cityofrehoboth.com			
<b>Telephone</b> 302-227-4641		<b>Cell</b> N/A	<b>Fax</b> 302-227-4643

ENGINEER					
Company Name GHD					
Mailing Address 16701 Melford Boulevard, Suite 330					
City Bowie			State MD		Zip 20715
Contact Name Sean Snow					
E-Mail Address Sean.snow@ghd.com					
Telephone 240-206-6841		Cell		Fax 240-206-6811	
GRAVITY SEWER INFORMATION					
Ownership N/A <input type="checkbox"/> Public <input type="checkbox"/> Private		Type of Sewer System N/A <input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Other?		If Other, list below N/A	
Type of Pipe N/A	Length (ft) N/A	Diameter (in) N/A	Joint Specification N/A	Min. Slope (ft/ft) N/A	Min. Velocity (ft/sec) N/A
Minimum Pipe Cover (ft) N/A	Number of Manholes N/A	Drop manholes provided? <input type="checkbox"/> Yes <input type="checkbox"/> No		Maximum Distance Between Manholes (ft) N/A	
Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained? N/A <input type="checkbox"/> Yes <input type="checkbox"/> No			If not, explain provisions to prevent cross-contamination: N/A		
Explain any special challenges (for example, stream, highway and/or railroad crossings, directional drilling, elevated sewers, etc.) N/A					
Comments Ocean outfall is included in the forcemain section for the purpose of this application.					

PUMP/LIFT STATION INFORMATION				
Ownership <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private		Type of Wastewater <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Other?		If Other, list below
Pump Station Flows (gallons/day)			Peak Factor	
Design 3.5 mgd	Average 1.1 mgd	Peak 7.2 mgd	2	
Basis of Design 7.2 mgd		Pump Type Vertical Turbine		
Will peak flows be accommodated if largest unit fails? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Pump calc's and pump curves attached? see drawings for pump curves <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cycle Time (minutes) 8.0 min (minimum)	Wet Well Detention Time (minutes) 1.12 min at peak flow	
Check valves provided on discharge line? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Gate valves provided on discharge line? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If not, explain alternate procedure: Butterfly valves provided in lieu of gate valves				
Ventilation provided in wet well? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Dry Well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is an alarm system included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Alternate source of power? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Duel service feed	
What other provisions for emergency operations? Installed spare pump will be provided				
Height of Influent Above Pump (suction head) (ft) N/A	Height of Effluent Above Pump (discharge head) (ft) Varies		Friction Loss (ft) See attached calculations	
Pump Design Point 2500gpm @ 63 ft (Subject to change)	Pump Operating Point Varies (VFD are to be used)	Static Head (ft) Max: 14.0 ft Min: -11.3 ft	Total Head (ft) See attached calculations	Required Motor Horsepower (hp) 60 hp
FORCE MAIN INFORMATION				
Type of Pipe FM: PVC C-905 DR 18, Ductile Iron (DI), Ductile Iron Fittings Outfall: HDPE		Length (ft) FM: 11,300 Outfall: 6,000	Diameter (in) 24"	
Hazen-Williams "C" Design Factor 120	Type of Joints FM: Bell with elastomeric seal gasket and mechanical restrained joints Outfall: Fused Joint	Velocity Under Design Conditions (ft/sec) 2 to 3.5 fps	Minimum Pipe Cover (ft) 3'	
Air relief valves specified? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Clean-outs provided? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Maximum distance between clean-outs (ft) N/A		
Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Not in all cases)		If not, explain provisions to prevent cross-contamination: Due to the limited availability of space at some locations a minimum 10' horizontal separation could not be maintained. The average proposed force main depth is 5 feet below existing water mains where space is concerned and provides a protection zone much higher than vertical 18 inch separation required. Centerline horizontal offsets between the force main and existing water mains range between 4.5 to 5 feet. In discussions with DNREC, portions of the force main pipe that are unable to meet the horizontal separation will be restrained.		

Comments

Note that the effluent pump station, forcemain and ocean outfall calculations are combined for the purpose of this application; however, they will be constructed in three separate contracts.